

USSN. 09/828,176

Examiner: FULLER, ERIC B

Group A.U.: 1762

October 1, 2003

Remarks*Claims rejections under 35 USC §112*

In the last Examination report, the Examiner rejected claim 1 under 35 USC §112, first paragraph, as containing subject matter which extends beyond the contents of the application as filed. Particularly, the Examiner stated that the specification does not disclose that a backing layer can be separated by the covering layer.

The Examiner is right in his statement and the Applicant fully agrees with it. The amendment proposed in the last communication to the Examiner is to ascribe to a misunderstanding: we apologize for the additional work the Examiner has been burdened with because of this misunderstanding.

Claim 1 recites the features which were originally disclosed in claims 1 and 6. To this regard, on page 6 of the Office Action dated June 24, 2002, the Examiner stated as follows:

"Claim 6 is rejected under 35 USC 103(a) as being unpatentable over Harbaugh in view of Hutton or Harbaugh in view of Zientek, as applied to claim 1 above, and further in view of Leenders.

None of references up this point teach that the coating may further be coated with a second backing layer. However, Leenders teaches and optional covering layer to be applied to a metal coating that is to be laser etched off a resin substrate. This covering layer is to protect the metal from mechanical wear (column 5, lines 1-5). This covering layer reads on a second backing layer applied to the other face of the coating layer. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize the covering layer of Leenders in the process taught by Harbaugh and Hutton or Harbaugh and Zientek. By doing so, mechanical wear is prevented."

Applicant's invention according to amended claim 1 now explicitly recites a method for manufacturing a securing element, characterized in that

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- a) the securing element comprises a first backing layer and a second backing layer embedding a covering layer
- b) the laser beam acts through one of the polyester backing layers in order to remove portions of the covering element

The great advantage provided over the prior art by the invention as claimed is that it is now possible to generate a securing element from a thread comprising a covering layer packed between two polyester layers, wherein the covering layer is customized by operating a laser which, its wavelength ranging between 900 and 1200 nm, is capable of ablating material even though such material is located between two polyester backing layers

As stated in the specification, page 6 lines 16-20:

"An important characteristic of the invention consists of the fact that the use of a laser with a wavelength between 900 and 1100 nm, preferably between 1030 and 1100 nm, can remove the covering layer by passing through the polyester backing without affecting it at all, thus preserving all the physical and chemical characteristics that are useful and necessary for their industrial use.

It is thus evident that it is possible to provide a thread which is obtained, for example, even by means of two coupled fibers and subsequently customize the thread, since removal of the layer can be obtained inside two covering layers [...]"

The applicant wishes to point out that none of prior art is capable of achieving a similar result and that the prior art does not teach nor fairly suggests to manufacture a securing element starting from a thread made of two polyester layers embracing a covering layer.

Moreover, it is respectfully maintained that the skilled in the art would have not, and could have not, combined the prior art in issue to achieve a similar manufacturing method, for the following reasons.

- 1) It is known that when a laser is employed to ablate material from a surface, the material sublimates and its vapors need to be dispersed. The cited prior art teaches to ablate material from a covering layer, but this is done by removing

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material which is somehow exposed to open air, both in the case that the laser beam acts directly on material lying on a support or that it acts on the same material through a support. No suggestion or hint is found in the prior art indicating that ablation may occur on a covering layer without allowing room for dispersing vapors, as it happens in the now claimed configuration. Moreover, no teaching is found suggesting that the laser wavelength hereby explicitly claimed is the one that is to be used for this purpose.

- 2) The skilled in the art could not apply the backing layer of Leenders to the combination of teachings of Harbaugh in view of Hutton or Harbaugh in view of Zientek, in that, as the Examiner acknowledges, the backing layer of Leenders is meant to be a protective layer for the metal coating that is to be laser etched off a resin substrate, in order to protect the metal from mechanical wear (column 5, lines 1-5). Since such layer is meant to be a protective layer, the skilled in the art would possibly provide a protective layer (e.g. silicone resin as in Leenders) in the securing element only after the covering layer has been etched (to protect the customized area) or would learn from Leenders that the protective layer is of a removable kind and/or that it must eventually be removed (see column 5, lines 23, in which it is clearly indicated that the protective layer is provided on a temporary basis).
- 3) Leenders's protective layer has nothing to do with Applicant's backing layers. In fact, the former one provides protection against mechanical wear and is removed when necessary. On the contrary, Applicant's backing layers work as "support" layers and are not to be separated from the covering layers. The three layers are all part of the securing element and, as the Examiner could ascertain in the last office action, are not meant to be separated, contrary to Leenders.
- 4) Finally, even if the protective layer of Leenders was applied to either of the above mentioned prior art combinations (Harbaugh in view of Hutton or Harbaugh in view of Zientek), the outcome would be very different compared

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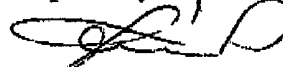
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to the invention as claimed. In fact, Applicant's method operates on a thread which can be etched indifferently by either side, either through the first or the second polyester backing layer, while the provision of a silicone resin protection layer like the one suggested by Lendeers would only generate a securing element comprising: 1) a support layer 2) a covering layer ("barrier layer" in Lendeers) 3) a protection layer. It would not be possible to operate a laser on either side of the product and the skilled in the art would not be in a position to apply the manufacturing method now claimed, in which the ablation step is performed irrespectively of the side on which the laser operates.

In view of the foregoing, it is trusted that the application is now in order for allowance and a notice to this effect is respectfully requested.

Respectfully submitted,



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